

WHAT IS CLAIMED IS:

1. An image recognition apparatus comprising:

shooting means for shooting an object image to be discriminatively recognized and identified;

a plurality of attribute-classified image database means classified respectively in accordance with a plurality of attributes corresponding to various situations of the shooting performed by said shooting means, and storing therein reference images classified by the attributes and also storing recognition ID attached uniquely to the reference images respectively;

selection means for selecting, from the plurality of attribute-classified image database means, one image database means of the attribute corresponding to the present situation of the face recognition; and

object specifying means for specifying the recognition ID, which corresponds to the object image shot by said shooting means, with reference to the reference image stored in the attribute-classified image database means selected by said selection means.

2. The image recognition apparatus according to claim 1, further comprising

date-and-time count means for counting the present date and time;

wherein said attribute-classified image database means are classified by attributes depending on the time shot by said shooting means; and

said selection means automatically selects, on the basis of the present date and time counted by said date-and-time count means, one attribute-classified image database means corresponding to the present date and time from said plurality of attribute-classified image database means.

3. The image recognition apparatus according to claim 1, further comprising

position measuring means for measuring the present position,

wherein said attribute-classified image database means are classified by attributes depending on the position shot by said shooting means; and

said selection means automatically selects, on the basis of the present position measured by said position measuring means, one attribute-classified image database means corresponding to the present position from said plurality of attribute-classified image database means.

4. The image recognition apparatus according to claim 1, further comprising

date-and-time count means for counting the present

date and time, and

position measuring means for measuring the present position;

wherein said attribute-classified image database means are classified by attributes depending on the time and the position shot by said shooting means; and

said selection means automatically selects, on the basis of the present date and time counted by said date-and-time count means and also the present position measured by said position measuring means, one attribute-classified image database means corresponding to the present date and time and the present position from said plurality of attribute-classified image database means.

5. The image recognition apparatus according to claim 1, further comprising

estimation means for estimating familiarity to the object image on the basis of the occupancy area ratio of the object image to the entire region shot by said shooting means, or on the basis of the number of times of specifying the object image by said object specifying means in the past, or on the basis of a combination of said occupancy area ratio and said number of times;

wherein said attribute-classified image database means are classified by attributes depending on the

familiarity to the object image estimated by said estimation means; and

said selection means automatically selects, on the basis of the familiarity estimated by said estimation means, one attribute-classified image database means corresponding to the familiarity to the object image shot by said shooting means at present, from said plurality of attribute-classified image database means.

6. The image recognition apparatus according to claim 5, further comprising

date-and-time count means for counting the present date and time,

wherein said attribute-classified image database means are classified by attributes depending on the familiarity to the object image estimated by said estimation means, and also by attributes depending on the time shot by said shooting means; and

said selection means automatically selects, on the basis of the familiarity estimated by said estimation means and the present date and time counted by said date-and-time count means, one attribute-classified image database means corresponding to the familiarity to the object image shot by said shooting means at present and also corresponding to the present date and time, from

said plurality of attribute-classified image database means.

7. The image recognition apparatus according to claim 5, further comprising

position measuring means for measuring the present position,

wherein said attribute-classified image database means are classified by attributes depending on the familiarity to the object image estimated by said estimation means, and also by attributes depending on the position shot by said shooting means;

and said selection means automatically selects, on the basis of the familiarity estimated by said estimation means and the present position measured by said position measuring means, one attribute-classified image database means corresponding to the familiarity to the object image shot by said shooting means at present and also corresponding to the present position, from said plurality of attribute-classified image database means.

8. The image recognition apparatus according to claim 5, further comprising

date-and-time count means for counting the present date and time, and

position measuring means for measuring the present

position;

wherein said attribute-classified image database means are classified by attributes depending on the familiarity to the object image estimated by said estimation means, and also by attributes depending on the time and the position shot by said shooting means; and

said selection means automatically selects, on the basis of the familiarity estimated by said estimation means, the present date and time counted by said date-and-time count means, and also the present position measured by said position measuring means, one attribute-classified image database means corresponding to the familiarity to the object image shot by said shooting means at present, the present date and time, and also corresponding to the present position, from said plurality of attribute-classified image database means.

9. An image recognition processing method comprising:

a selection step of selecting one attribute-classified image database corresponding to the present situation from a plurality of attribute-classified image databases classified respectively in accordance with a plurality of attributes corresponding to various situations of the shooting performed by a shooting means

in respect of an object image to be discriminatively recognized and identified, and storing therein reference images classified by the attributes and also storing recognition ID attached uniquely to the reference images respectively; and

an object specifying step of specifying the recognition ID, which corresponds to the object image shot by said shooting means, with reference to the reference image stored in the attribute-classified image database selected at said selection step.

10. The image recognition processing method according to claim 9, further comprising

a date-and-time count step of counting the present date and time;

wherein said attribute-classified image databases are classified by attributes depending on the time shot by said shooting means; and at said selection step, one attribute-classified image database corresponding to the present date and time is selected automatically from said plurality of attribute-classified image databases on the basis of the present date and time counted at said date-and-time count step.

11. The image recognition processing method according to claim 9, further comprising

a position measuring step of measuring the present position,

wherein said attribute-classified image databases are classified by attributes depending on the position shot by said shooting means; and at said selection step, one attribute-classified image database corresponding to the present position is selected automatically from said plurality of attribute-classified image databases on the basis of the present position measured at said position measuring step.

12. The image recognition processing method according to claim 9, further comprising

a date-and-time count step of counting the present date and time, and a position measuring step of measuring the present position;

wherein said attribute-classified image databases are classified by attributes depending on the time and the position shot by said shooting means; and at said selection step, one attribute-classified image database corresponding to the present date and time and the present position is selected automatically from said plurality of attribute-classified image databases on the basis of the present date and time counted by said date-and-time count step and also the present position



measured by said position measuring step.

13. The image recognition processing method according to claim 9, further comprising

an estimation step of estimating familiarity to the object image on the basis of the occupancy area ratio of the object image to the entire region shot by said shooting means, or on the basis of the number of times of specifying the object image at said object specifying step in the past, or on the basis of a combination of said occupancy area ratio and said number of times;

wherein said attribute-classified image databases are classified by attributes depending on the familiarity to the object image estimated at said estimation step; and at said selection step, one attribute-classified image database corresponding to the familiarity to the object image shot by said shooting means at present is selected automatically from said plurality of attribute-classified image databases on the basis of the familiarity estimated by said estimation means.

14. The image recognition processing method according to claim 13, further comprising

a date-and-time count step of counting the present date and time,

wherein said attribute-classified image databases

are classified by attributes depending on the familiarity to the object image estimated by said estimation means, and also by attributes depending on the time shot by said shooting means; and at said selection step, one attribute-classified image database, which corresponds to the familiarity to the object image shot by said shooting means at present and also corresponds to the present date and time, is selected automatically from said plurality of attribute-classified databases on the basis of the familiarity estimated at said estimation step and the present date and time counted at said date-and-time count step.

15. The image recognition processing method according to claim 13, further comprising

a position measuring step of measuring the present position,

wherein said attribute-classified image databases are classified by attributes depending on the familiarity to the object image estimated at by said estimation step, and also by attributes depending on the position shot by said shooting means; and at said selection step, one attribute-classified image database, which corresponds to the familiarity to the object image shot by said shooting means at present and also corresponds to the present

position, is selected automatically from said plurality of attribute-classified image databases on the basis of the familiarity estimated at said estimation step and the present position measured at said position measuring step.

16. The image recognition processing method according to claim 13, further comprising

a date-and-time count step of counting the present date and time, and

a position measuring step of measuring the present position;

wherein said attribute-classified image databases are classified by attributes depending on the familiarity to the object image estimated by said estimation means, and also by attributes depending on the time and the position shot by said shooting means; and at said selection step, one attribute-classified image database, which corresponds to the familiarity to the object image shot by said shooting means at present, the present date and time, and also corresponds to the present position, is selected automatically from said plurality of attribute-classified image databases on the basis of the familiarity estimated at said estimation step, the present date and time counted at said date-and-time count step, and also the present position measured at said

position measuring step.

17. An image recognition program comprising:

a selection step of selecting one attribute-classified image database corresponding to the present situation from a plurality of attribute-classified image databases specified respectively in accordance with a plurality of attributes corresponding to various situations of the shooting performed by a shooting means in respect of an object image to be discriminatively recognized and identified, and storing therein reference images classified by the attributes and also storing recognition ID attached uniquely to the reference images respectively; and

an object specifying step of specifying the recognition ID, which corresponds to the object image shot by said shooting means, with reference to the reference image stored in the attribute-classified image database selected at said selection step.

18. The image recognition program according to claim 17, further comprising

a date-and-time count step of counting the present date and time;

wherein said attribute-classified image databases are classified by attributes depending on the time shot

by said shooting means; and at said selection step, one attribute-classified image database corresponding to the present date and time is selected automatically from said plurality of attribute-classified image databases on the basis of the present date and time counted at said date-and-time count step.

19. The image recognition program according to claim 17, further comprising

a position measuring step of measuring the present position,

wherein said attribute-classified image databases are classified by attributes depending on the position shot by said shooting means; and at said selection step, one attribute-classified image database corresponding to the present position is selected automatically from said plurality of attribute-classified image databases on the basis of the present position measured at said position measuring step.

20. The image recognition program according to claim 17, further comprising

a date-and-time count step of counting the present date and time, and a position measuring step of measuring the present position;

wherein said attribute-classified image databases

are classified by attributes depending on the time and the position shot by said shooting means; and at said selection step, one attribute-classified image database corresponding to the present date and time and the present position is selected automatically from said plurality of attribute-classified image databases on the basis of the present date and time counted by said date-and-time count means and also the present position measured by said position measuring means.

21. The image recognition program according to claim 17, further comprising

an estimation step of estimating familiarity to the object image on the basis of the occupancy area ratio of the object image to the entire region shot by said shooting means, or on the basis of the number of times of specifying the object image at said object specifying step in the past, or on the basis of a combination of said occupancy area ratio and said number of times;

wherein said attribute-classified image databases are classified by attributes depending on the familiarity to the object image estimated at said estimation step; and at said selection step, one attribute-classified image database corresponding to the familiarity to the object image shot by said shooting means at present is

selected automatically from said plurality of attribute-classified image databases on the basis of the familiarity estimated by said estimation means.

22. The image recognition program according to claim 21, further comprising

a date-and-time count step of counting the present date and time,

wherein said attribute-classified image databases are classified by attributes depending on the familiarity to the object image estimated by said estimation means, and also by attributes depending on the time shot by said shooting means; and at said selection step, one attribute-classified image database, which corresponds to the familiarity to the object image shot by said shooting means at present and also corresponds to the present date and time, is selected automatically from said plurality of attribute-classified databases on the basis of the familiarity estimated at said estimation step and the present date and time counted at said date-and-time count step.

23. The image recognition program according to claim 21, further comprising

a position measuring step of measuring the present position,

wherein said attribute-classified image databases are classified by attributes depending on the familiarity to the object image estimated at by said estimation step, and also by attributes depending on the position shot by said shooting means; and at said selection step, one attribute-classified image database, which corresponds to the familiarity to the object image shot by said shooting means at present and also corresponds to the present position, is selected automatically from said plurality of attribute-classified image databases on the basis of the familiarity estimated at said estimation step and the present position measured at said position measuring step.

24. The image recognition processing method according to claim 21, further comprising

a date-and-time count step of counting the present date and time, and

a position measuring step of measuring the present position;

wherein said attribute-classified image databases are classified by attributes depending on the familiarity to the object image estimated by said estimation means, and also by attributes depending on the time and the position shot by said shooting means; and at said selection step, one attribute-classified image database,



which corresponds to the familiarity to the object image shot by said shooting means at present, the present date and time, and also corresponds to the present position, is selected automatically from said plurality of attribute-classified image databases on the basis of the familiarity estimated at said estimation step, the present date and time counted at said date-and-time count step, and also the present position measured at said position measuring step.